



Exchange 2003 Design

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Exchange 2003 Overview

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- What's new compared to 5.5
 - Exch Admin functionality is now split between AD Users and Computers and Exchange Snap-ins
 - Routing Groups (old Sites) and other functions are configured in the Exchange Snap-in
- Exchange Architecture
 - Similar to Exch 5.5 with AD
 - Client Server Messaging system
 - The server services and/or Outlook will contact each other to retrieve messages
 - If Outlook can't contact the server you can't view your mailbox



Exch 5.5 vs. 2003

~~Comparison~~

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- 5.5 relied heavily on the RPC service
- 2003 relies on SMTP
 - Requires IIS to be installed on the 2003 Server in order to use the SMTP connectors (required for Exch 2003)
- 2003 can talk RPC to 5.5 if you leave Exch 2003 in mixed mode
- 5.5 Organization is like the Forest in 2003
- Dist Lists are now Dist Groups



Organization Hierarchy

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- Admin Groups
 - Routing Groups
 - Servers
 - Storage Groups
 - **Information Store contains:**
 - Mailbox Information Store
 - Public Information Store



Exchange Components

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- **Required Components:**
- Information Store
 - Storage Groups
 - 4 Mailbox Stores in each storage group plus 1 reserved for backup and restoration operations (5 total)
 - Exch 2003 Enterprise can have 4 Storage Groups and 4 Mailbox Stores per Storage Group
 - Each Mailbox Store can be backed up and restored independently of each other
 - Collection of databases
 - Each Storage Group can have 1 or more Public and Private information stores



Optional Components

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- Connectors
 - Routing Group Connectors
 - Preferred connector for linking routing groups
 - Can also use SMTP or x400 connectors
- AD Connector
 - Links Exch 5.5 and Exch 2003 directories in synch
- SMTP Connector (Exchange)
 - Provides support for dial up routing group connections
- Conference Management (Snap-in)
 - Information Store will coordinate meeting requests sent to a mailbox for video conferences and room scheduling



Distribution Groups

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- Same as a distribution list in Exch 5.5
- Configured in AD users and computers
- Two types of groups--Security and Distribution
 - Security group can have ACL permissions and can be used to route messages
 - Distribution group cannot be assigned permissions and can also be used to route messages
- Contacts
 - Created in AD Users and Computers
 - Replaces Custom Recipients



Exchange 2003 Planning

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- Planning Process
 - Required Permissions
 - Forest Prep
 - Where and when to run
 - Domain Prep
 - Where and when to run
 - Define Administrative Boundaries
 - Routing Groups



Exchange 2003 Planning

cont...

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- Connectors
 - Routing Group Connector (RGC)
 - SMTP
 - X.400
- Distribution Groups
- Storage Groups
 - Mailbox Stores
 - Public Stores
- Exchange 5.5 interoperability (DMS/DMDS)



Exchange 2003 Planning

cont...

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- **Planning a Server/Hardware Requirements**
 - Drive allocation
 - Log file location
 - Disaster recovery planning
 - Ability to backup and restore each IS
 - Hardware RAID
 - UPS
 - Spread the load or concentrate
 - Define how close other services are located
 - AD, DNS, GC
 - Validate and test in a non production environment



Design Review

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- Domain and Site Relationships
 - Sites are now Routing Groups in Exchange 2003
 - Use Exch System Manager to create them
 - Can use single, hierarchical, hub and spoke or full mesh
- Designing the name space
 - Don't make the Domain and Exch Organization names different
 - This can cause the IS service not to start
- Routing Group Links
 - Assign costs for multiple links
 - Can use RGC or SMTP (both use SMTP)
 - Can use X.400 for Exch 5.5 (must also change the LDAP port to TCP port 390 in Exch 5.5 Admin in the Protocols container)



Design Review cont...

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- AD Intra/Inter Site Replication
 - Intra-site uses DS-RPC
 - Inter-site can be over either DS-RPCs or SMTP
 - Use the KCC to establish the links
- Creating Exchange 2003 Mailboxes and Groups
 - Use the AD Users and Computers snap-in
- Global Catalog Placement



Exchange Connectors

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- Routing Group Connectors
- Active Directory Connector
- SMTP Connector
- X.400 Connector
- Schedule +Free/Busy Connector



Routing Group Connector

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- Microsoft preferred connector for linking Exchange 2003 Server routing groups
- Benefits include:
 - Easy configuration
 - Support for multiple (redundant) links between the same two routing groups
- Uses SMTP preserves its native communication mode in E2K



Active Directory Connector

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- Used primarily to link Exchange 2003 Server and Exchange 5.5 systems
- Keeps AD and Exchange 5.5 directory in synch
- Once all Exchange 5.5 servers are converted to Exchange 2003 server, you will not need AD connector



SMTP Connectors

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- Windows 2003 (IIS 5.0) SMTP service handles internet messaging
- Exchange 2003 SMTP connector is used to enhance internet messaging
 - Supports dialup connections



X.400 Connector

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- Used to link Exchange servers to foreign X.400 systems
- X.400 connector can ride on top of TCP/IP, Microsoft Remote Access Services or X.25 networking services
- Also may be used to link Exchange routing groups



Storage Groups

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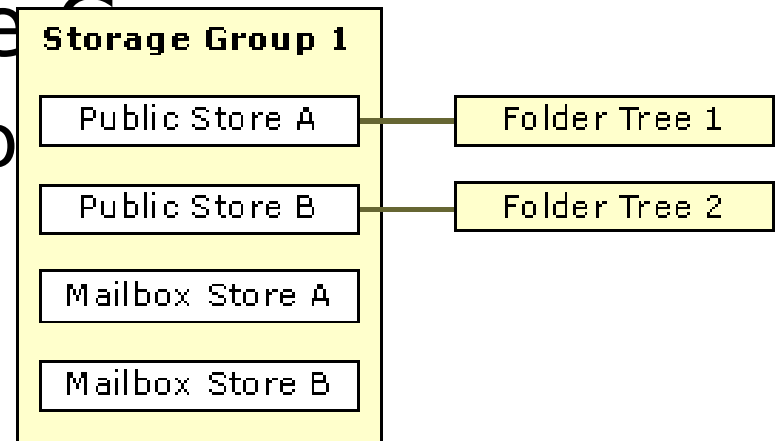
- Storage Group
 - Contains the Exchange Databases
 - Share 1 transaction log
 - Four Storage Groups per server
 - 4 databases per storage group
 - Total of 16 databases per server



Storage Group Setup

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- Setting up a Storage Group
 - Create a Storage Group
 - Create a Folder Tree
 - Create Public Stores
 - Create Mailbox Stores
 - Create Public Folders and Mailboxes





Outlook Web Access

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- What is Outlook Web Access (OWA)?

Outlook Web Access is a feature of Exchange that allows users to access mail and scheduling information from an Exchange server, using a standard Web browser



Features and Limitation

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- Features
 - Exchange access to non Windows clients
 - Uses simple URLs to reference items
 - Ideal for Front-End Back-End configuration
 - WebDAV protocol
- Limitations
 - No offline support or synchronization
 - Advanced Security is not supported
 - Tasks can not be managed



Planning for a Disaster

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- Items that need to be considered when planning your disaster recovery
 - Acceptable downtime
 - Hardware Requirements
 - Plan your organization with recovery in mind
 - Items to have on-hand
 - Log all Server Maintenance



Database Recovery Considerations

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- Normal backups should backup an entire storage group
 - Normal (Deletes Logs older than Checkpoint)
 - Incremental (Deletes Logs older than Checkpoint)
 - Differential (Doesn't delete logs)
- It is possible to restore a single database in a storage group without affecting other databases
 - Uses a reserved ESE instance to temporarily hold the restored database



Backing up your Server

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- Choose the type of recovery you are going to use
 - Restore or Rebuild
- At a minimum the least you should backup are the storage groups and the log files.
- Choose a type of backup
 - Normal
 - Incremental
 - Differential



Questions?

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